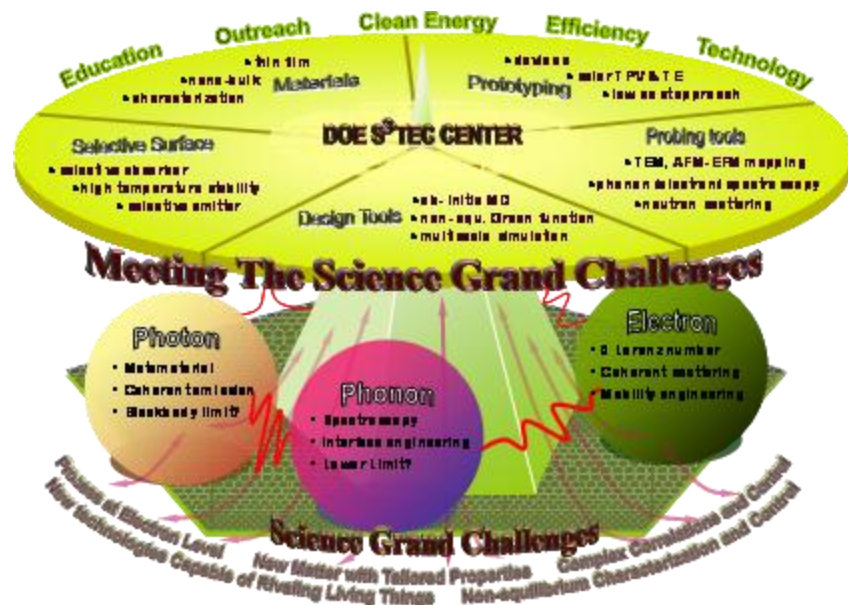




U.S. DEPARTMENT OF
ENERGY

Solid-State Solar Thermal Energy Conversion Center (S³TEC) Gang Chen (MIT)

S³TEC Center aims at developing transformational solid-state energy technologies to convert solar energy into electricity via heat, by advancing fundamental science of energy carrier coupling and transport, designing new materials, and inventing cost-effective manufacturing processes, and training energy workforce.



RESEARCH PLAN AND DIRECTIONS

(1) Engineering electron and phonon transport in nanostructures to achieve high performance thermoelectric materials, (2) controlling photon absorption and emission for materials working at high temperatures, and (3) device prototyping to demonstrate the high efficiency and low cost potential of the solar thermoelectric and solar thermophotovoltaic energy conversion technologies.